

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the above-referenced application.

Listing of Claims:

1. (Currently amended) An electron-beam device having an optical axis, comprising:
 - a beam generator that generates an electron beam;
 - an objective lens that focuses the electron beam on an object;
 - at least one detector ~~that detects~~ positioned along the optical axis and detecting at least one of: electrons scattered on the object and electrons emitted by the object; and
 - at least one opposing field grid which is allocated to the at least one detector, wherein a voltage is applied to the opposing field grid such that the electrons emitted by the object are not detected by said at least one detector.

Claims 2-4 (Cancelled).

5. (Original) The electron-beam device as recited in Claim 1, further comprising scanning means for directing the electron beam toward the object.
6. (Original) The electron-beam device as recited in Claim 5, wherein the scanning means includes at least two scanning elements per plane.

7. (Currently amended) The electron-beam device as recited in Claim 1, ~~wherein the electron-beam device includes an optical axis and~~ wherein the opposing field grid and the detector are positioned extra-axially to the optical axis.
8. (Currently amended) The electron-beam device as recited in Claim 1, further comprising at least one deflection device having at least one deflector for directing the electron beam from and toward ~~[[an]]~~ the optical axis.
9. (Original) The electron-beam device as recited in Claim 8, wherein the deflector is a magnetic unit.
10. (Original) The electron-beam device as recited in Claim 8, wherein the deflector is arranged in the electron-beam device in a region between the object and the beam generator.
11. (Original) The electron-beam device as recited in Claim 8, wherein the deflection device includes a first deflector that directs the electron beam out of the optical axis and a second deflector that directs the electron beam into the optical axis.
12. (Original) The electron-beam device as recited in Claim 8, wherein the deflection device includes a first deflector that directs the electron beam out of the optical axis, a second deflector that steers the electron beam toward the optical axis, and a third deflector that directs the electron beam into the optical axis.

13. (Original) The electron-beam device as recited in Claim 1, wherein the detector includes at least two detection regions.

14. (Original) The electron-beam device as recited in Claim 1, wherein the electron-beam device includes at least one additional detector.

Claims 15- 23 (Cancelled).

24. (Original) The electron-beam device as recited in Claim 1, wherein the electron-beam device includes at least one additional detector, and wherein at least one of the detectors includes at least one opposing field grid.

25. (Original) The electron-beam device as recited in Claim 24, wherein each detector includes least one opposing field grid.

26. (Original) The electron-beam device as recited in Claim 1, further comprising an electron energy controlling device that accelerates and slows down the electrons of the electron beam to specified energies and also maintains the energy after acceleration.

27. (Original) The electron-beam device as recited in Claim 1, wherein the detector detects electrons backscattered on the object.

Claims 28-37 (Cancelled).

38. (Currently amended) A method of detecting electrons, comprising:

generating an electron beam;

focusing the electron beam on an object;

detecting electrons scattered on the object or emitted by the object using at least one detector positioned along an optical axis; and

selecting a portion of the electrons according to electron energy, wherein said selecting includes using a diaphragm, said diaphragm including at least one opposing field grid, and wherein said selecting includes applying a voltage to the opposing field grid such that the electrons emitted by the object are not detected.

39. (Original) The method of claim 38, wherein said portion of the electrons selected according to electron energy are backscattered electrons.

40. (Original) The method of claim 38, wherein said portion of the electrons selected according to electron energy are secondary electrons.

Claims 41-43 (Cancelled).

44. (Original) The method of claim 38, further comprising directing the electron beam from and toward an optical axis.

45. (Original) The method of claim 38, wherein said selecting is performed according to phase space of said portion of the elections.

46. (Cancelled)

47. (New) An electron-beam device having an optical axis, comprising:

a beam generator that generates an electron beam;

an objective lens that focuses the electron beam on an object;

a first detector and a second detector, the first detector and the second detector detecting at least one of: electrons scattered on the object and electrons emitted by the object, said first detector being positioned object-side along the optical axis, and said second detector being positioned generator-side along the optical axis; and

at least one opposing field grid which is allocated to the second detector, where a voltage is applied to the opposing field grid such that a portion of the electrons emitted by the object and having passed the first detector is not detected by the second detector.

48. (New) The electron-beam device as recited in Claim 47, further comprising scanning means for directing the electron beam toward the object.

49. (New) The electron-beam device as recited in Claim 48, wherein the scanning means includes at least two scanning elements per plane.

50. (New) The electron-beam device as recited in Claim 47, wherein the opposing field grid and the second detector are positioned extra-axially to the optical axis.

51. (New) The electron-beam device as recited in Claim 47, further comprising at least one deflection device having at least one deflector for directing the electron beam from and toward the optical axis.
52. (New) The electron-beam device as recited in Claim 51, wherein the deflector is a magnetic unit.
53. (New) The electron-beam device as recited in Claim 51, wherein the deflector is arranged in the electron-beam device in a region between the object and the beam generator.
54. (New) The electron-beam device as recited in Claim 51, wherein the deflection device includes a first deflector that directs the electron beam out of the optical axis and a second deflector that directs the electron beam into the optical axis.
55. (New) The electron-beam device as recited in Claim 51, wherein the deflection device includes a first deflector that directs the electron beam out of the optical axis, a second deflector that steers the electron beam toward the optical axis, and a third deflector that directs the electron beam into the optical axis.
56. (New) The electron-beam device as recited in Claim 47, wherein the detector includes at least two detection regions.

57. (New) The electron-beam device as recited in Claim 47, wherein each detector includes least one opposing field grid.

58. (New) The electron-beam device as recited in Claim 47, further comprising an electron energy controlling device that accelerates and slows down the electrons of the electron beam to specified energies and also maintains the energy after acceleration.

59. (New) The electron-beam device as recited in Claim 47, wherein the second detector detects electrons backscattered on the object.

60. (New) A method of detecting electrons, comprising:

generating an electron beam;

focusing the electron beam on an object;

detecting electrons scattered on the object or emitted by the object using a first detector and a second detector, the first detector being positioned object-side along the optical axis and the second detector being positioned generator-side along an optical axis;

selecting a portion of the electrons according to electron energy, wherein said selecting includes using a diaphragm, the diaphragm including at least one opposing field grid, and wherein said selecting includes applying a voltage to the opposing field grid such that a portion of the electrons emitted by the object and having passed the first detector is not detected by the second detector.

61. (New) The method of claim 60, wherein said portion of the electrons selected according to electron energy are backscattered electrons.
62. (New) The method of claim 60, wherein said portion of the electrons selected according to electron energy are secondary electrons.
63. (New) The method of claim 60, further comprising directing the electron beam from and toward an optical axis.
64. (New) The method of claim 60, wherein said selecting is performed according to phase space of said portion of the elections.